



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,001	01/21/2005	Walter Gumbrecht	32860-000834/US	1704
30596 7590 09/30/2009 HARNESS, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195				
EXAMINER				
CROW, ROBERT THOMAS				
ART UNIT		PAPER NUMBER		
1634				
MAIL DATE		DELIVERY MODE		
09/30/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/522,001

Applicant(s)

GUMBRECHT ET AL.

Examiner

ROBERT T. CROW

Art Unit

1634

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 17 September 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: None.
Claim(s) objected to: None.
Claim(s) rejected: 1-4, 7, 9-15 and 32.
Claim(s) withdrawn from consideration: 16-27 and 29-31.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

/Robert T. Crow/
Examiner, Art Unit 1634

Continuation of 3. NOTE: As noted in the Advisory Action mailed 1 September 2009, the after-final amendments filed 24 August 2009 further limit the claims a plurality of spot arrays and to electrical measurements. These new limitations further narrow the scope of the claims, and thus require additional search and consideration because the claims now require these additional limitations. These new limitations were not present at the time of the final rejection, and therefore will not be searched.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's after-final arguments filed 17 September 2009 (hereafter the "Remarks") are the same after-final arguments filed 24 August 2008, which were fully considered but unpersuasive for the reasons discussed in the Advisory Action mailed 4 September 2009. The examiner's response from the previous Advisory Action is reiterated below in response to the arguments resubmitted in the instant Remarks.

A. It is noted that Applicant's proposed amendment to the specification would overcome rejection to the specification detailed in the previous Final Office Action.

B. Applicant argues on pages 8-9 of the Remarks that the recitation of "in which biochips are placed onto a substrate" is an active method step because the preamble should be construed as if in the balance of the claim. Applicant also argues on page 9 of the Remarks that any terminology limited the structure of the claimed invention must be treated as a claimed limitation.

However, the limitation has been construed in the balance of the claim; namely, a substrate comprising a biochip is taught by the prior art and presented in the rejection of the claims. Thus, the structural limitation (i.e., biochips placed on a substrate) has been considered. The issue in the instant claims is whether the recitation of "in which biochips are placed onto a substrate" is an active method step of the claim. Because the recitation occurs before the word "comprising" in the claim, the recitation is not part of the claimed method; i.e., the method begins with the applying of a sample liquid to the biochips, which follows the word "comprising" in independent claim 1.

C. Applicant argues on page 9 of the Remarks that Chateau teaches a tape, not biochips.

However, a review of the specification yields no limiting definition of the structure encompassed by a "biochip." Therefore, as discussed in the Final Office Action, Chateau teaches reaction areas 13 are formed on a longitudinal tape that allows continuous analysis of the plurality of samples (column 3, lines 1-67 and Abstract). Thus, the tape is interpreted as the instantly claimed substrate, the biochips are interpreted as the reaction areas 13 on the tape (Figure 1), and the reaction areas 13 are interpreted as having a plurality of measurement reagents fixed thereon. Thus, the claim has been given the broadest reasonable interpretation consistent with the teachings of the specification regarding a "biochip" (In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000) (see MPEP 2111 [R-1])).

D. Applicant's arguments regarding "electrical measurements" on page 10 of the Remarks refer to the amended claims and rely solely on the amendments. Since the amendments have not been entered, the after final arguments referring to the amendments have not been considered.

E. Applicant argues on pages 9-10 of the Remarks that Chen does not teach an array with lines and gaps.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., lines and gaps) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In addition, Figure 1 of Chateau clearly depicts an array with lines and gaps.

F. Applicant argues on page 11 of the Remarks that the electrode layer of paragraph 0119 (i.e., of Chen et al) is not the same as that required for performing the claimed "electrical measurements." Thus, Applicant is arguing the prior art of Chen et al individually.

However, a review of the specification yields no limiting definition of the type of assays encompassed by the claimed "electrical measurements."

Therefore, the "electrical conductance" scanning measurements taught by Chen et al are "electrical measurements," and the claim has been given the broadest reasonable interpretation consistent with the teachings of the specification regarding "electrical measurements."

In addition, as noted in the Final Office Action, Gordon et al teach the known technique of using electrically addressable biochips having electrical contact elements for measurements to be carried out from below the substrate. Thus, as detailed in the Final Office Action, the combination of the cited prior art teaches all of the claimed limitations, and the rejection of the claims under 35 USC 103(a) as obvious over the cited prior art is proper.

Further, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

G. Applicant argues on pages 11-12 of the Remarks that Gordon et al do not teach conducting the reactions on a tape. Thus, Applicant is arguing the prior art of Gordon et al individually.

However, Gordon et al is not relied upon for the tape; rather, both Chateau and Chen et al teach the use of tape substrates.

Further, in response to applicant's arguments against the references individually, it is reiterated that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

H. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Gordon et al teach the electrodes (i.e., 119 of Figure 4), which have electrical contacts for measurements in the form of data and address buses 126, 128, and 130 below the substrate 112 (Figures 4 and paragraph 0131), have the added advantage of allowing selective chemical activity at specific electrodes on the chip (paragraph 0040). Thus, Gordon et al teach the known technique of using electrically addressable biochips having electrical contact elements for measurements to be carried out from below the substrate and the modification is obvious for the reasons discussed above and in the Final Office Action.

In addition, it is also noted that the Supreme Court ruling for *KSR Int'l Co. v. Teleflex, Inc* (No 04-1350 (US 30 April 2007)) forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See *Ex parte Smith* (USPQ2d, slip op. at 20 (Bd. Pat. App. & Interf. June 25, 2007)).

I. Applicant argues that Gordon et al do not teach measurement of several biochips of carrying out the measurement from the back of a chip or tape. Thus, Applicant is arguing the prior art of Gordon et al individually.

However, as noted above and in the Final Office Action, Gordon et al also teach the electrodes (i.e., 119 of Figure 4) have electrical contacts for measurements, in the form of data and address buses 126, 128, and 130 that are below the substrate 112 (Figures 4 and paragraph 0131). Thus, contrary to Applicant's assertions, the measurements are performed from below the substrate because the measurement contacts are below the substrate.

With respect to the measuring of several biochips on a tape, Gordon et al is not relied upon for either of these limitations. Rather, both Chen et al and Chateau teach tapes, and Chateau teaches measuring at multiple biochips.

Further, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., measuring of several biochips) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims do not require electrical measurements at more than one biochip.

In addition, in response to applicant's arguments against the references individually, it is reiterated that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

J. Applicant's arguments on page 12 of the Remarks regarding the motivation to combined Gordon et al are unpersuasive for the reasons presented above.

/Robert T. Crow/
Examiner, Art Unit 1634. .